

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

**TRANSLATION**  
**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See form PCT/ISA/210**

Applicant's or agent's file reference  
**35289PCT**

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
**PCT/FR2004/050613**

International filing date (day/month/year)  
**24.11.2004**

Priority date (day/month/year)  
**24.11.2003**

International Patent Classification (IPC) or both national classification and IPC  
**H04N7/08**

Applicant  
**MEDIALIVE**

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

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Box No. 1

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐

This opinion has been established on the basis of a translation from the original language into the following language

\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☐

in written format

☐

in computer readable form

c. time of filing/furnishing

☐

contained in the international application as filed.

☐

filed together with the international application in computer readable form.

☐

furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. II

Priority

1. ☐ The following document has not yet been furnished:
- ☐ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).
  - ☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).
- Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date in the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

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Box No. IV

Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:
- ☒ paid additional fees
  - ☐ paid additional fees under protest
  - ☐ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with
  - ☒ not complied with for the following reasons:
4. Consequently, this opinion has been established in respect of the following parts of the international application:
- ☒ all parts
  - ☐ the parts relating to claims Nos. \_\_\_\_\_

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-10	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-10	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO

2. Citations and explanations:

1 Reference is made to the following documents:

D1: WO 03/063445 A (MEDIALIVE; LECOMTE DANIEL (FR)) 31  
July 2003 (2003-07-31)

D2: WO 01/67667 A (WAJS ANDREW AUGUSTINE; IRDETO ACCESS  
BV (NL); ENTRIQ (US); WHITE MARK) 13 September 2001  
(2001-09-13)

D3: WO 02/062054 A (GEN INSTRUMENT CORP) 8 August 2002  
(2002-08-08)

D4: WO 02/45334 A (NORTEL NETWORKS LIMITED; NORTEL  
NETWORKS UK LIMITED) 6 June 2002 (2002-06-06)

Concerning points II and VII

2 The priority document does not contain the following  
passages from the present application:

- (a) page 12, lines 26-27,
- (b) page 15, lines 11-14,
- (c) page 15, lines 18-26,
- (d) page 15, lines 29-30
- (e) page 15, lines 31-34.

As passages (b) and (e) do not appear to be directly and  
unambiguously differentiable from the content of the

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priority document, the priority claim of the present application may be considered to be invalid.

3 The application does not fulfil the requirements of PCT Article 6, as claims 1, 6, 8 and 9 are not clear.

3.1 Claim 1 fails to comply with the requirements of PCT Article 6 in so far as the subject matter for which protection is sought has not been clearly defined. The claim attempts to define said subject matter in terms of the result to be achieved ("in secure multicast mode"), yet this merely amounts to stating the basic problem the invention is intended to solve, without providing the technical features necessary to arrive at this result.

3.2 The following terms:

- (a) "enhanced, used in claim 1,
- (b) "multi-reception," used in claim 6,
- (c) "management," used twice in claim 6 and
- (d) "personalized," used in claim 8,

are vague and ambiguous, and cast doubt on the significance of the technical features to which they refer. The subject matter of the said claims is therefore not clearly defined (PCT Article 6).

3.3 Claim 9 is defined in a general manner by the following proposition:

"the control of flow in the multicast group is performed in accordance with the securing and personalization of the additional information."

However, the description does not appear to contain

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details relating to the abovementioned proposition.  
Consequently, claim 9 is not based on the description, as required by PCT Article 6.

**Concerning point IV**

4 This Administration considers that the subject matter of independent claim 1 does not constitute a contribution in relation to the prior art. The requirement of unity of the invention (PCT Rule 13.1) is therefore not observed, inasmuch as the technical relationship involving one or more of the same or corresponding special technical features does not exist between the subject matters of the following groups of dependent claims within the meaning of PCT Rule 13.2:

I) Claims 2-4, 6-8 and 10 relate to a process and a system for the distribution of digital audiovisual flows, distributing the video data on a broadcast channel and a multicast channel and utilizing individual session keys to secure the transmission,

II) Claims 5 and 9 relate to a process and a system for optimizing the bandwidth, thanks to extensions of the multicast protocols.

The reasons for which the present application relates to two inventions that are unconnected to each other in such a way that they only form a single general inventive concept are the following:

4.1 The prior art is represented by document D1. This document reveals all the elements of claim 1 that may

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constitute a contribution in relation to the prior art  
(see part 5 of the present communication).

4.2 For claim 2, authentication between the client and the server (in unicast mode) therefore appears to be the particular technical element.

The technical effect resulting from this particular technical element is the on-line verification "that the client has sufficient rights to receive UFICS and to generate the session key" (description, page 13, lines 10-13).

The problem resolved by this particular technical element may therefore be considered to be "the secure, personalized transmission of information" (description, page 5, lines 8-10).

4.3 For claim 5, considered to be dependent on claim 1, the inclusion of the management of multicast groups in the link layer therefore appears to be the particular technical element.

The technical effect resulting from this particular technical element is the reduction of multicast message traffic.

The problem resolved by this particular technical element may therefore be considered to be the optimization of the "bandwidth for each client at its access point" (description, page 15, lines 8-15).



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4.4 The above analysis shows that the particular technical elements of the groups of the invention and the objective problems to be resolved by these inventions are not identical or corresponding, and that no general inventive concept links the groups of inventions.

The present application therefore does not fulfil the unity of the invention requirements.

**Concerning point V**

5 Moreover, in spite of the lack of clarity mentioned above, the subject matter of claims 1 and 10 does not involve an inventive step within the meaning of PCT Article 33(3); consequently, the requirements set out in PCT Article 33(1) are not fulfilled.

5.1 Document D1, which is considered to be the closest prior art to claim 1, describes (by using the terms of the claim, the references between parentheses apply to this document):

A process for the secure distribution of digital audiovisual flows according to a standard, standardized or proprietary format (page 12, lines 1-3), the said flows where, before being transmitted to the destination hardware, the flow is divided into two parts in order to generate a modified main flow in the format of the original flow, and additional information in any format, comprising the digital information suited for the reconstruction of the original flow (page 17, lines 14-28),

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characterized in that the said modified main flow is transmitted from a distribution server via separate paths during the distribution phase (page 23, lines 18-24), in that said additional information is sent in secure enhanced mode [...] to the said destination hardware from a secure central server (from page 25, line 33, to page 27, line 5 and page 27, lines 28-32) passing through at least one router and at least one switch connecting the said destination hardware to the said central server via at least one access point (page 18, lines 13-19).

5.2 The additional technical feature of the process (transmission in multicast mode) is considered to be a common design option for clients-server systems, in order to reduce the load of the server, by reducing the number of unicast connections.

A person skilled in the art would have recourse to this option without making use of any inventive step. This technical feature therefore does not constitute a contribution in relation to the prior art.

5.3 The same argument applies *mutatis mutandis* to the subject matter of corresponding independent claim 10, which is therefore no longer inventive.

6 Claims 2-9 do not contain any feature that, in combination with those of any claims to which they refer, defines a subject matter that satisfies the requirements of the PCT as regards novelty and/or inventive step.

6.1 Concerning claim 2, the problem resolved by its

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additional features therefore may not be considered to improve security during authentication.

However, these features have already been employed with the same aim in a similar process: document D2 describes a process for the secure distribution of digital audiovisual flows according to a standard format, the said flows on which separation of the flows into two parts is performed before transmission to the destination hardware (see summary and figure 4, for example).

D2 also describes authentication in unicast mode (see page 12, lines 1-4). This step constitutes, moreover, a standard step for a person skilled in the art in order to improve authentication security; conditional access systems conventionally use a unicast connection for identifying clients.

It is obvious to a person skilled in the art to apply these features, with a corresponding effect, to a process in accordance with document D1 and to therefore obtain a process in accordance with claim 2.

6.2 Concerning claim 5, the problem resolved by its additional features may therefore be considered to be the optimization of the bandwidth.

These features have, however, already been employed with the same aim in a similar process: document D4 describes a process for the secure distribution of digital audiovisual flows in multicast mode (see summary, for example), where management of the multicast group is

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performed in the link layer securing access to the  
distribution of multicast data (see page 7, line 15 to  
page 8, line 16).

It is obvious to a person skilled in the art to apply  
these features, with a corresponding effect, to a process  
in accordance with document D1 and to therefore obtain a  
process in accordance with claim 5.

6.3 Concerning the other dependent claims, the applicant  
is invited to refer to documents D1, D2, D3 and D4, as  
well as to the corresponding passages cited in the search  
report.

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

See separate sheet

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